

Appl. No. 10/600,412  
Reply dated February 18, 2006  
Reply to Office Action mailed September 23, 2005

1. Listing of the claims:

1. (Currently Amended) An automated ~~Automated~~ storage system for storing and picking articles, comprising:
  - a device for separating delivered articles into packing units and transferring the latter onto trays, wherein the trays each have openings, through which lifting pins engage in order to lift a packing unit from the tray,
  - a tray storage facility for storing the packing units on the trays,
  - a retrieval conveying system for removing and feeding the packing units in sequence for loading onto order load carriers, and
  - a loading station for loading the packing units in a defined loading sequence onto the order load carriers.
2. (Currently Amended) The storage ~~Storage~~ system according to claim 1, wherein in the tray storage facility one packing unit is situated on each tray.
3. Cancelled.
4. (Currently Amended) The storage ~~Storage~~ system according to claim 1, having a pallet storage facility for storing the articles on incoming load carriers.
5. (Currently Amended) The storage ~~Storage~~ system according to claim 1, wherein the retrieval conveying system has a sorting device for trays.
6. (Currently Amended) The storage ~~Storage~~ system according to claim 1, wherein the retrieval conveying system comprises computer-controlled rack-mounted take-off machines.
7. (Currently Amended) The storage ~~Storage~~ system according to claim 1, wherein the tray storage facility is designed for storing trays of a plurality of defined dimensions.
8. (Currently Amended) The storage ~~Storage~~ system according to claim 1, wherein the loading station has at least one loading machine for automated loading of the order load carriers with the packing units.
9. (Currently Amended) The storage ~~Storage~~ system according to claim 8, wherein a plurality of retrieval paths of the retrieval conveying system are associated with each loading machine.

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10. (Currently Amended) The storage Storage system according to claim 8, having a rotary apparatus for rotating the trays and packing units situated thereon into a defined position for feeding to the loading machine.

11. (Currently Amended) The storage Storage system according to claim 1, having a tray-vibrating device for defined positioning of a packing unit on the tray.

12. (Currently Amended) The storage Storage system according to claim 1, having a packing-unit tilting device for tilting a packing unit and for depositing the tilted packing unit on the tray.

13. (Currently Amended) The storage Storage system according to claim 1, having a load-carrier tilting device for tilting load carriers for the purpose of loading laterally enclosed load carriers.

14. (Currently Amended) The storage Storage system according to claim 1, wherein the tray storage facility has storage modules for collating the packing units into article groups.

15-19. (Canceled)

20 - 30. Cancelled.

31. (New) A method of picking and storing articles in a storage facility, the method comprising:

separating the stored articles into packing units;

transferring the packing units onto trays;

storing the packing units situated on the trays in a tray storage facility used as a buffer;

removing and feeding, using a retrieval conveying station, the packing units in sequence for loading onto order load carriers; and

loading the packing units at a loading station in a defined loading sequence onto the order load carriers.

32. (New) The method of claim 31, wherein one packing unit is stored on each tray.

33. (New) The method of claim 31 further comprising storing the articles on the incoming load carriers in a pallet storage facility.

34. (New) The method of claim 31, wherein removing and feeding, using a retrieval conveying station, the packing units further comprises sorting device for the trays.

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35. (New) The method of claim 31, wherein storing the packing units further comprises storing trays of a plurality of defined dimensions.

36. (New) The method of claim 31, wherein loading the packing units further comprises automatically loading, with at least one loading machine, of the order load carriers with the packing units.

37. (New) The method of claim 36 further comprising rotating, using a rotary apparatus, the trays and packing units situated thereon into a defined position for feeding to the loading machine.

38. (New) The method of claim 31 further comprising using a tray-vibrating device to define a position of a packing unit to the tray.

39. (New) The method of claim 31 further comprising tilting, using a packing-unit tilting device, a packing unit and depositing the tilted packing unit on the tray.

40. (New) The method of claim 31 further comprising tilting, using a load-carrier tilting device, load carriers for the purpose of loading laterally enclosed load carriers.

41. (New) The method of claim 31, wherein storing the packing units further comprises collating, using storage modules, the packing units into article groups.